File Name: SupplementaryData1.xlsx

Description: Clinical data for 381 samples used in analysis after applying quality control

metrics.

File Name: SupplementaryData2.xlsx

Description: Statistical summary of 47 recurrent fusions pairs tested for association with

TL using a two-sided Mann-Whitney U test.

File Name: SupplementaryData3.xlsx

Description: Results from two-sided Spearman's correlation between tumour TL and methylation beta values, RNA abundance and protein abundance. Q values are FDR adjusted *P* values. NAs indicate missing values where tests could not be performed.

File Name: SupplementaryData4.xlsx

Description: Results from two-sided Spearman's correlation between TL ratio (tumour TL/ non-tumour TL) and methylation beta values, RNA abundance and protein abundance. Q values are FDR adjusted *P* values. NAs indicate missing values where tests could not be performed.

File Name: SupplementaryData5.xlsx

Description: Associations between CNAs and Tumour TL, ordered by *Q* values. Each row represents collapsed segments containing multiple genes. Contiguous gene segments with aberrations in less that 5% of patients were removed.

File Name: SupplementaryData6.xlsx

Description: Statistically significant associations between CNAs and TL ratio (tumour TL/non-tumour TL), ordered by Q values. Each row represents collapsed segments containing multiple genes. Contiguous gene segments with aberrations in less that 5% of patients were removed.